

## INFORMATION SHEET

ORDER NO. R5-2007-XXXX  
SK FOODS  
LEMOORE TOMATO PROCESSING FACILITY  
KINGS COUNTY

### Background

SK Foods (Discharger) operates a tomato processing facility (Facility) southwest of Lemoore, in Kings County. The Facility processes tomatoes for canning and currently has an average daily flow of about 1.7 million gallons per day (mgd) during the processing season (July through October) and about 400,000 gallons per day in the off-season. Before the 2007 processing season (July through October) wastewater was discharged to an 863-acre parcel southwest of the Facility. Wastewater is screened and aerated before being discharged to the Use Area.

The Discharger submitted a Report of Waste Discharge (RWD) dated October 2006, in support of an increase in the discharge to land of wastewater from the existing Facility. Waste Discharge Requirements (WDRs) Order No. 98-167, adopted by the Regional Water Board on 24 July 1998, limits the discharge flow to 2.5 mgd. The WDRs also establish daily maximum limits for biochemical oxygen demand (BOD) of 400 milligram per liter (mg/L). WDRs Order No. 98-167 does not reflect the configuration of the Wastewater Expansion Project.

The Wastewater Expansion Project consists of increasing the discharge limit to 4.5 mgd and discharging wastewater to an approximately 2,600-acre disposal site or Use Area about 5 miles southwest of the Facility. The increase in flows is primarily because flows that were formerly discharged to the City of Lemoore's wastewater treatment facility will now be discharged the Use Area. Additional processes within the facility may also require more water. The existing pipeline was modified and extended by the Discharger to reach the new Use Area and new lines will be constructed in 2008 to allow the increase in flow from the Facility.

### Solids Disposal

The wastewater is screened at the Facility and the screenings (pomace and tomato hulls) are collected in a bin and hauled off-site as cattle feed. In the event the current solids disposal option ceases, the screenings will be land applied to a portion of the 2,600-acre Use Area. The Discharger estimates it produces about 15,000 tons annually.

### Groundwater Conditions

Regional groundwater is contained within two aquifers; a lower confined aquifer exists beneath the Corcoran Clay and an upper unconfined aquifer exists above it. Available data indicates the top of the Corcoran Clay is about 500 feet bgs and is approximately 80 to 100 feet thick beneath the area. The upper unconfined aquifer is further divided into a lower zone and an upper-perched groundwater zone.

Groundwater quality of the lower confined aquifer is typically of excellent quality (EC concentrations between 250 and 650 umhos/cm) and provides the majority of water for domestic purposes in the area. The deeper portion of the upper unconfined aquifer is reported to be of good quality with EC values ranging from 600 to 1,200 umhos/cm.

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The shallow or perched aquifer is of extremely poor water quality. The Discharger installed 11 shallow monitoring wells at the Use Area in January 2007 before discharging tomato wastewater to the property. EC concentrations ranged from about 7,500 umhos/cm to 46,000 umhos/cm. All EC, chloride, sulfate, and TDS concentrations exceed primary or secondary maximum contaminant levels. The wastewater has EC concentrations that are at a minimum four to five times less than the lowest levels reported for the shallow groundwater indicating the wastewater will not degrade water quality with respect to these constituents.

### **Compliance History**

WDRs Order No. 98-167 was written when the Discharger disposed of the wastewater by discharge to the Westlake Canal. Inspections in 1998 and 1999 observed several areas of the WDRS that the discharger was in violation of. Those violations included dissolved oxygen concentrations less than 1.0 milligrams per liter (mg/L), BOD greater than 400 mg/L, discharging untreated or partially treated wastewater, causing DO in the receiving water to fall below 5.0 mg/L, and failure to submit self monitoring reports.

An inspection in September 2000 revealed violations of the WDRs and Conditional Waiver for dissolved oxygen concentrations less than 1.0 mg/L, BOD greater than 400 mg/L, failing to notify the Regional Water Board of noncompliance, and causing DO in the receiving water to fall below 5.0 mg/L. A Notice of Violation for these issues was sent to the Discharger on 26 February 2001.

In June 2001, the Discharger began discharging to the currently used 863-acre Use Area. A site inspection on 8 August 2002 noted that no violations were observed. No effluent violations have been noted since then; however, the Discharger routinely submits late reports.

### **Basin Plan, Beneficial Uses, and Regulatory Considerations**

The Basin Plan indicates the greatest long-term problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Regional Water Board encourages proactive management of waste streams by dischargers to control addition of salt through use, and has established an incremental EC limitation of 500 µmhos/cm as a measure of the maximum permissible addition of salt constituents through use.

Discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000 µmhos/cm, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

### **Antidegradation**

The antidegradation directives of State Water Board Resolution No. 68-16 (Resolution 68-16), "Statement of Policy With Respect to Maintaining High Quality Waters in California," or "Antidegradation Policy" require that waters of the State that are better in quality than established water quality objectives be maintained "consistent with the maximum benefit to the people of the State." Waters can be of high quality for some constituents or beneficial uses

and not others. Policy and procedures for complying with this directive are set forth in the basin plan.

The receiving water is not of high quality as it contains naturally occurring waste constituents in concentrations that exceed water quality objectives. The lowest EC concentrations observed in shallow groundwater are 4 to 5 times higher than the highest values recorded for the effluent applied. Total nitrogen concentrations in groundwater samples collected from the shallow wells range from 2.2 mg/L in well MW-10 to 110 mg/L in well MW-6. Effluent Total Nitrogen concentrations range from 6.1 mg/L to 75 mg/l in 2006, similar to that of the groundwater. The Discharger collected the available groundwater data in January, February, and March 2007 before the discharge of wastewater to the 2,600 acre Use Area in July 2007.

### **Treatment Technology and Control**

The Wastewater Expansion Project will provide treatment and control of the discharge that incorporates:

- a. Screening at the plant before discharge to the Use Area to remove solids that are hauled offsite and used as cattle feed;
- b. Application of wastewater at plant uptake rates for nitrogen and organic loading;
- c. Application of wastewater at rates that will not allow wastewater to stand for more than 48 hours;
- d. Blending of wastewater with irrigation water to meet the agronomic requirements for crop growth; and
- e. At least daily inspection of the Use Area during times of discharge.

### **Title 27**

Title 27, CCR, section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Title 27 Section 20090(b) exempts discharges of designated waste to land from Title 27 containment standards provided the Regional Water Board has issued waste discharge requirements or waived such issuance; the discharge is in compliance with the Basin Plan; and the waste need not be managed according to Title 22, CCR, Division 4.5, Chapter 11, as a hazardous waste.

Accordingly, the discharge of effluent and the operation of treatment or storage facilities associated with a food processing facility can be allowed without requiring compliance with Title 27, provided the resulting degradation of groundwater is in accordance with the Basin Plan.

### **CEQA**

The Discharger submitted a draft Initial Study in October 2006 in conjunction with a RWD. Regional Water Board staff reviewed and edited the Initial Study and circulated it along with a draft Negative Declaration for public comment. Comments were received by the Department of Water Resources, Caltrans, the Department of Health Services, and a nearby landowner. Each comment was addressed and the CEQA documents were adopted at the August meeting of the Regional Water Board.

### **Proposed Order Terms and Conditions**

#### **Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions**

The proposed Order prohibits discharge to surface waters and water drainage courses.

The proposed Order would approve the increase over the current Order's monthly average daily discharge flow limitation from 2.5 to 4.5 mgd.

The proposed Order would set an Effluent Limitation on BOD loading of 100 lbs/acre/day, seasonally and over any particular discharge cycle. Based on the ten-day cycle time, the 2.5 mgd wastewater application rate, 700-acre Reuse Area, and a BOD concentration of 1,315 mg/L, the Discharger should be able to comply with these limits without further treatment. Compliance with this requirement as flows increase to the proposed 4.5 mgd flow limit is achievable through full use of the 2600-acre Reuse Area.

The proposed Order requires the Discharger to submit a Salinity Control Plan that will detail measures taken to reduce the salinity of the discharge and document that all feasible salinity reduction measures have been implemented.

The proposed WDRs would prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedance of these objectives or natural background water quality, whichever is greatest.

#### **Monitoring Requirements**

Section 13267 of the CWC authorizes the Regional Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment of civil administrative liability where appropriate.

The proposed Order includes influent and effluent monitoring requirements, Use Area monitoring, groundwater monitoring, and water supply monitoring. The monitoring is necessary to evaluate groundwater quality and the extent of the degradation from the discharge.

### **Reopener**

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The proposed Order would set limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.

**JSP 8/23/07**

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